THE

TRAINING SCHOOL BULLETIN

MARCH 1918

War Work

E. R. Johnstone

War time problems seem to touch every phase of our lives. Those of us who have been trying for years to secure proper care for the feeble-minded in the various states must now use every effort. Tests are being made in some of our army camps in order that the intelligence of the men may be understood. This will be extended to all of the camps as soon as sufficient examiners have been trained at the school at Camp Oglethorpe.

The results already obtained at four of the camps show great opportunities and the need for action. Indeed the problem begins before the men get to the camps.

First are the men who are rejected (or put in the defective classification) by the local examining boards because of mental deficiency. They should be officially reported to the State Board of Charities—or some other State body—in the State in which they live.

Second are those men who are sent to the camps but upon careful mental examination are so unstable, irresponsible or stupid as to be unable to meet the requirements of camp life. They will probably continue to be discharged at once but they too should be reported to some State body.

Third are those who, although mentally defective, are of such high grade that they can be of real value in the permanent camp activities. They are unable to live up to the strict disciplinary life of the normal men, but can be very useful digging ditches, making roads, pulling stumps, handling freight, shovelling coal, doing laundry work, etc. Men of like mentality are doing such work in the institutions of the country, but these men need to be recognized as just what they are.

This group should also be reported to their own State officials, for when the war is over and demobilization takes place they should not be simply thrown back upon their communities.

The Government should wisely say "You have been called by your country. You have been a burden to your families and to your communities in the past. I shall now take you under my protection. You shall have good food and care and oversight. If I can find use for you in our camps I shall give you occupation suited to your capabilities. I shall see that you have proper entertainment also. But all of this will be under competent supervision. If there is not work enough in the camps for all of you, some will be assigned to the Department of Agriculture or the Department of Labor, and still under my control I shall let you be happy, and useful to your country."

For years we have been asking the different states to make surveys in order that they may ascertain the number of their feeble-minded. But surveys cost a great deal of money and but few even partial surveys have been made. Now the Government, through its psychological and psychiatric divisions, is testing out all of the men between the ages of twenty-one and thirty-one, indeed all army men, and the results of these examinations should not be lost.

The records of every one of these men should be sent–in full–to the Surgeon General of the Public Health Service in Washington, so that they may be tabulated, analyzed and interpreted. Copies of these records should also be in the hands of the proper State authorities so that these men may be cared for in suitable institutions where, instead of being burdens, they may be taught to lead useful lives, harmless to themselves and to society.

We have been trying for years to persuade the various States that there are enough such people marrying and mating and bringing into the world large families of children of low mentality. What better argument do we need than these facts? Let these names be placed on record in any State and that State will see the need of speedy action.

371.92
T68
v. 15-16

There is still another group—the feeble-minded women—who because of their weakness, ignorance and innocence, are drifting into the vicinity of the camps as prostitutes. It is estimated that at least one half of the latter are feeble-minded. As they are driven out at one place they come in at another.

They should be protected. Our men should be protected from them. Do not forget the story of the Kallikak Family. It is a camp story. Let us briefly recall it.

Martin Kallikak Sr., a young man of good family, answered his country's call at the beginning of the Revolutionary war by joining a militia company. At one of the taverns which the members of his company frequented, he met a feeble-minded girl (not knowing that she was feeble-minded—for many of them have a rather attractive appearance). By her he became the father of a feeble-minded son who was in turn through eight generations, the ancestor of four hundred and eighty most undesirable descendants of whom four-fifths were defectives. After the Revolution Martin married a respectable girl of normal mentality. They had seven normal children from whom four hundred and ninety-six desirable citizens have descended.

It is up to you—to me— to all of us to prevent the founding of a new Kallikak family in any one of our cantonment cities.

Do not forget too the disease menace from these women. It is all too serious for us to blind our eyes through false modesty.

The American Committee on Provision for the Feeble-minded is now working on these problems. It needs money to carry on its work, so if you wish to help send your check to it at 701 Empire Building, Philadelphia. Field workers are needed—are asked for by the National Committee for the Protection of Women and Girls. The work of propaganda must be carried into the State—especially those that contain cantonments and camps.

NOW IS THE TIME TO ACT.

A telegram from Kentucky says that their bill for the care of the feeble-minded, with ample appropriation has just passed.

174061 59

Children's Treats

Anna W. Hutchinson

Our boys have many treats and surprises during the year. It may be an invitation to a special party given by some boy, or it may be a trip to the Colony, or a moving picture show, or an entertainment at Garrison Hall. Perhaps the treat is at "Store" where the "O. K." slip counts, and they may buy what they want. Possibly it is an evening of entertainment in one of the many sitting-rooms.

To appreciate and enjoy these events, one needs to be there to see the enthusiasm the boys show. It seems as though the games like parchesi, flinch, snap, checkers and auto-race are the most enjoyed. At times they become most exciting. They are usually played "square" and the loser is a good loser. As Russel said the other day after he had been "flinched," "I guess I'd better smile and try next time to keep wide awake."

Letters and packages from home are always most welcome. A day never passes that some boy does not stop at my office door and inquire if there is a package for him. Sometimes the home folks send a letter saying they are going to send a package. The suspense of waiting requires more patience than most of our boys have and to tell them that trains have been delayed does not satisfy. I wish folks would not promise such things. Better have the surprise of getting it than the suspense of waiting and fear that it may not be sent. It is true that sometimes friends forget the promises they make and that means a big disappointment.

On more than one occasion, rather than have him wait too long, I have fixed up a box for some boy. The other day when I was giving out some packages, little Albert followed me around a bit and finally said: "Wish I had a mother to send me a pat-age" I told him perhaps some friend might send him a box some day. The next day I fixed up a box and gave it to him. He was, of course, pleased and surprised to get his "pat-age" with his own name and cottage on it. He said "I guess the mail man found a friend for me."

One great surprise and pleasure this year has been the snow. When the first real snow came, there was a great scrambling for the sleds that had been away in the attics for ever so long, just aching to be taken out by some live boy and kept from rusting. It was indeed a happy lot of boys. When one of our new employes came to complain that she "just couldn't keep her boys in" I was glad of a chance to explain that we want to take advantage

of every minute of such a rare thing as snow. This year it has been anything but rare but we have had all the more pleasure from it.

I was interested to see one of the boys in her group taking this same employe for several rides the next day, and I believe she enjoyed it as much as he did.

A Case Study

L. A. Boylan, Vineland

The subject from which this investigation was started, is a boy, Frank P., found in the Special Class in W——. Frank is an attractive fourteen-year-old boy of Italian descent. Physically he is average for his size but mentally he is over four years retarded. In order to explain Frank's retardation, a thorough investigation of environmental and hereditary conditions was undertaken. The neighborhood is of fair grade, but the home conditions are of the very lowest. This family, consisting of the parents and five children, live in three back rooms of a little frame house for which they pay eight dollars a month. They live in filth and dirt with seemingly no attempt to even keep the children clean. There is every indication of a low moral condition. The boy's mother is a rather tall, untidy and dissipated looking woman. She was born in 1887. Her parents emigrated from Italy when quite young. Her father, a huckster, was very cruel to the family. His temper seemed almost insane. He died when 44 years of age of heart disease. Her mother, Mrs. K., an only child, is now living with her son, Joe, in Philadelphia. She is 65 years old and was recently married to K. He left her and went to W—— with a "housekeeper" and lives in the vilest conditions. Mrs. K. is a little lame, due to a broken hip, but is able to do some work, such as house-cleaning and berry-picking.

Mrs. P. has two sisters known as "Crazy" Laura and "No-Good" Kate. The latter, a prostitute, is now living in New York. Mary is married and lives in W——. Her husband is a cobbler by trade, but, tho husky, refuses to work. Laura makes and peddles aprons. With tearful eyes she relates a sad story at each door, which brings her double and often triple prices for her wares. They have six children; one in a reformatory for highway robbery, one out on parole, and the others notorious characters in the school and court. Very little is known of Mrs. P.'s two brothers. Joe lives in Philadelphia where he works in a glass factory. Lem is thot to be a motorman in New York. He is married and has three small children. It is the consensus of opinion that this man is insane.

From the description of Mrs. P.'s own family, it is evident that life in filth and dirt is the only way known to her. There is absolute lack of

religion. Being a professional beggar, she sends her children to any church that will give them help. Consequently they have been members of every church in W——. Altho her husband is a steady worker, their income is small. Mrs. P. adds to it by doing piece work on coats, finishing collars, cuffs, etc., at seven cents per coat. The maximum amount possible to earn is $1.12 per day, but her average amount is seventy-five cents. In times of stress, in order to make ends meet, they resorted to the keeping of a "blind pig." However, after a few months, they were forced to close this. Mrs. P. is very illiterate. She had about three years' school training, and then, due to the influence of a cousin of her mother's, the whole family went to W—— to work in a glass factory. She worked only a short time and then married.

Mr. P. is thirty-six years old. He came from Italy at the age of nineteen and worked in a glass factory, at ten dollars per week, in Philadelphia. Later he went to W——, where he met Laura J., and was married when twenty-two years of age. He has had no school training; can neither read nor write. Said he played "hookey" until his parents put him to work. Little is known of his family. He has one brother and two sisters in Italy; one brother works in a glass factory in Philadelphia and one in a glass factory in W——. The latter married a very "nice" woman, and they are now living in moderate but clean and healthy conditions. They have seven children, four of whom (boys) are in school. The oldest tested by the Binet over three years retarded. The other children are reported as being very slow and stupid. Mr. P. is a steady worker and has been connected with this factory four years. However, his drinking is so excessive that it frequently leaves him in a paralyzed condition.

This is the stock from which Frank has descended. The family on both sides is decidedly defective. There are several other children living. Sara, a very weak child of 7 years, tested 6^1 by the Binet. Ike, 4 years, tubercular. Sam, 3 years, deformed. The family physician reports that there is syphilis in the family. The parents are both alcoholic. This family has steadily drifted from bad to worse.

The only hope for Frank lies in the Special School. He has a good disposition and shows no marked peculiarities, but his mental development is unusually slow. Since this is the period of the most rapid normal development, the retardation assumes a greater significance. His parents are most anxious for him to secure his working papers so he can work in the glass factory, and thus add to their small income. It is the problem of the Special School to decide whether or not Frank, in spite of his heredity, is capable of caring for himself or whether he should be trained to be a happy, useful, institutional case.

This is merely one example of the many families of this type. It will illustrate the rapidity with which they spread and the menace they may become to a community.

Notes Concerning the Training School

The Admission of Children.

As mentality is the chief consideration we have many grown-up pupils whose minds are still in the childhood period, and we speak of all as "children."

The Training School is in no sense a State Institution. We receive pupils from any state or county.

The occupations and training continue throughout the year and are largely individual in character so that children may be received at any time.

The fee for tuition and maintenance is sixty dollars a month unless in special cases.

The Examination of Children.

Parents who wish to know more of the mentality of their child may bring it (by appointment) to our psychological laboratory for examination.

By arrangement with the Superintendent, children may be received for three months, six months or a year for special observation and study.

When any child is admitted it is thoroughly examined and tested in the medical, educational and psychological departments.

The Care of the Children.

The children are divided into twenty-four groups in seventeen cottages.

The chief consideration, when placing a child for his home life, is that he shall be in a congenial group.

All buildings have hot and cold water, electric lights, steam heat and sanitary toilet facilities. We have driven wells for our water supply, and a method of sewage disposal approved by the State Board of Health.

The Dietitian co-operates with the physician to see that all get proper food and our large farm (with dairy, poultry plant, orchards and gardens) keeps us well supplied with pure and fresh foods.

With the new Chandler Hospital, our resident physician and corps of nurses and the advice of our staff of consultants, we are in position to give the best of medical care.

The Training and Entertainment.

Life in the Training School is very much like that of a small community where there are shops, farms, school, places of entertainment and a place for religious exercises.

While our children never become skilled artisans, many of them are able to do elementary work in the shops and can get much training helping the mechanics.

The farm lands are extensive and the cultivation and care of the orchards, gardens, lawns, poultry and stock divisions is under the direction of experts who make good trainers.

The school building is a model of its kind and the teachers are selected for their patience, personality and special knowledge.

Entertainments are given each week throughout the winter and parties, picnics and trips abound.

"The Process of Weaving"

Rachel H. Leedom, Vineland

Weaving, one of the oldest of the industrial arts, dates back so far that no one knows when or where it originated.

It is thought that first of all twigs and sticks were woven together. We have record of houses the roofs of which were made by weaving sticks, grasses, etc., together; this roof served to keep out the cold and rain for a while at least.

We do know that Adam wore a coat of skin, and that the early descendants of Adam wore an upper garment, resembling a blanket, called the simla (Ashenhurst).

In Lev. xiii, 48, we are told that linen and wool were used for warp and woof threads, for garments. We know that "Joseph wore a coat of many colors" which proves that dyeing was then in evidence. Also John xix, 23, mentions Christ's coat as a vesture which was woven without a seam.

Primitive weaving began with making baskets and various other crude yet useful articles. As far back as Egyptian dynasties weaving was carried on. In the nineteenth century the draw-loom was introduced in China. At about seventeen hundred ninety the work of weaving as an industry began. In Colonial days wool could only have been matted together by weaving; so it is probable that the art of weaving preceded the art of felting.

Shedding is the process of dividing the warp threads for plain weaving. The motion of throwing the woof across is called picking. Then pushing the woof threads together is called battering.

The hand loom is a machine used in weaving; the principal parts of which are the frame, the warp-beam, the cloth-roll, the heddles and their mounting, the reeds. The warp beam is a wooden cylinder back of the loom on which the warp is wound. The threads of the warp extend in parallel

order from the warp beam to the front of the loom and are attached to the cloth roll. Each thread or group of threads of the warp passes thru an opening (eye) of a heddle. The warp threads are separated by the heddles into two or more groups; each controlled and automatically drawn up and down by the motion of the heddles. Every time the harness (the heddles) moves up or down, an opening (shed) is made between the threads of warp, thru which the shuttle is thrown.

The filling thread is wound on a bobbin which is fastened in the shuttle and which permits the woof to unwind as it passes to and fro. As fast as each filling thread is interlaced with warp it is pressed close to the previous one by means of a reed which advances toward and recedes from the cloth after each passage of the shuttle. This makes the cloth firm.

Weaving is distinct from knitting, netting, looping, and braiding. These are operations depending on the interlacing of a single thread, or a single set of threads, while weaving is done with two distinct and separate sets of threads.

The weaving of paper strips, and rug weaving with various materials is carried on extensively in the schools today. In the kindergarten only coarser materials as paper strips and coarse yarns are used. Right here the child gains the idea of number, proportion, harmony of color, while in grades there is a still greater field for invention.

Weaving has proved to be an excellent occupation in institutions for the mentally deficient, the blind, the deaf, and in hospitals for nervous and insane patients.

After five months in France, Homer Folks, Secretary of the State Charities Aid Association of New York, but now Head of Civil Affairs Department of the Red Cross, in reply to a request for New Year's message, cables in part as follows:

> "There is one—clear, emphatic, unescapable. It is this: Social ills in peace time become national calamities in war."

Mayor Mitchel, of New York city, spoke on Monday at the laying of the cornerstone of the first of twelve new buildings to be erected at the Children's Hospitals and School for the Feeble-minded on Randall's Island under an appropriation of $1,600,000. Some of the present buildings were put up in 1869. "In an institution such as this," said Mayor Mitchell, "the buildings should last no longer than their usefulness. When better methods have been found for the treatment of the unfortunates who have occupied them and when better methods of construction have been devised, then these buildings that we are erecting today must come down and new buildings take their place. That is progress and nothing short of it is progress."—*Survey, September 29, 1917,*

Current Literature

Flora E. Otis, Vineland

Helen MacMurchy. The Selection of Children for Special Classes. Ungraded, Vol. II, No. 5, February, 1917. Pp. 110-113.

Florence Mateer. The Moron as a War Problem. Jour. of Applied Psychology, Vol. I, No. 4, December, 1917. Pp. 317-320.

New York State Board of Charities. Performance Norms for Thirteen Tests. Eugenics and Social Welfare Bulletin, No. 8, 1917.

Angelo Patri. A Schoolmaster of the Great City. New York, 1917. Pp. 221.

Rudolf Pintner and Donald G. Paterson. A Scale of Performance Tests. New York, 1917. Pp. 218.

Horatio M. Pollock and Edith M. Furbush. Insane, Feeble-Minded, Epileptics and Inebriates in Institutions in the United Statees, January 1, 1917. Mental Hygiene, Vol. I, No. 4, October, 1917. Pp. 548-566.

Aaron J. Rosanoff. Survey of Mental Disorders in Nassau County, New York. National Committee for Mental Hygiene, Publication No. 9, New York, 1917. Pp. 125.

Schools for the Feeble-Minded. Report of the Com. of Education, Vol. II, 1917. Washington, D. C. Pp. 647-660.

Mina A. Sessions. Feeble-Minded in Ohio. Jour. of Heredity, Vol. VIII, No. 7, July, 1917. Pp. 291-298.

Special Class Teachers. The Boston Way—Plans for the Development of the Individual Child. Boston, 1917. Pp. 127.

A. Warren Stearns. Defectives in Our Prisons. Boston Medical and Surgical Journal, Vol. CLXXVI, No. 23, June 7, 1917. Pp. 801-803.

Annis M. Sturgis. Possibilities of Outlining Work for Subnormal Children Along the Line of Productive Labor. Ungraded, Vol. II, No. 7, April, 1917. Pp. 162-166.

George A. Thacher. Feeble-Mindedness and Crime in Oregon. Jour. of Delinquency, Vol. II, No. 4, July, 1917. Pp. 211-224.

George A. Wallace. The Type of Feebleminded Who Can be Cared for in the Community. Jour. of Psycho-Asthenics, Vol. XXI, Nos. 3 and 4, March and June, 1917. Pp. 88-93.

J. E. Wallace Wallin. The Feebleminded in the State of Missouri. Psychological Clinic, Vol. XI, No. 2, April 15, 1917. Pp. 55-62.

J. Harold Williams. A Scale for Grading Neighborhood Conditions. Publications of Whittier State School, Whittier, Cal. Dept. of Research, Bulletin No. 5, May, 1917.

J. Harold Williams. A Study in Delinquency. Eugenics Review, Vol. IX, No. 1, April, 1917. Pp. 18-31.

Herbert Woodrow. Practice and Transference in Normal and Feeble-Minded Children. Jour. Educational Psychology, Vol. VIII, Nos. 2 and 3, February and March, 1917. Pp. 85-96 and 151-165.

Frederick Adams Woods. Significant Evidence for Mental Heredity. Jour. of Heredity, Vol. VIII, No. 3, March, 1917. Pp. 106-112.

Review

Clinical Studies in Feeble-Mindedness, by Edgar A. Doll. Richard Badger, Boston, 1917. Price, $2.50.

This book is divided into two parts: first, Diagnostic Criteria; second, Illustrative Cases. In part one are three chapters: first, Introduction; second, Criteria and Definitions; third, Diagnostic Methods and Values. Part two consists of six illustrative cases: first, Obviously Feeble-Minded; second, Potentially Feeble-Minded; third, Potentially Normal; fourth, Deaf-Mute, Neurotic or Psychopathic, but Not Feeble-Minded; fifth, Psychopathic with Slight Intellectual Retardation Not Amounting to Feeble-Mindedness; sixth, High-Grade Borderline Immigrant. There is also an excellent Bibliography, a Glossary of Technical Terms, a Glossary of Mental Tests and an Index.

There has been of late considerable worriment on the part of a good many interested people over the possible danger in the diagnosis of feeble-mindedness. It has been feared that the popularization of the Binet tests and their use by people who are not psychologists would result in great confusion and the stigmatizing of many normal children as mentally defective. The reviewer has never shared this fear, his experience and observation leading him to the conclusion that users of mental tests are afraid to make a diagnosis rather than being inclined to rush in hastily. Doubtless there are some exceptions, but these cases usually cure themselves very quickly. If there is such danger, no better corrective could be found than this volume by Mr. Doll. It sets forth most clearly the dangers and difficulties of diagnosis. No inexperienced person can study these six illustrative cases without realizing how impossible it would be for him, unaided, to decide between these cases.

In the reviewer's experience a far more important problem than the one already referred to is that of the child who is *abnormal* but not *feeble-minded*. If these cases are considered feeble-minded they are at once given up as hopeless; if they are considered normal they are naturally treated

as normal, and the treatment makes them worse rather than better. One or the other of these two solutions is generally accepted. Cases four and five particularly make it plain that there is a third group, and that it is possible by carefully selected tests and methods to discover the condition.

Since the idea of testing intelligence has taken hold of the public mind there have been so many different tests proposed that the person who comes at the problem for the first time is naturally confused at the multiplicity, realizing that he cannot use them all and yet not knowing without experience which are the practical and valuable ones. Nowhere in print is there such a careful statement of a group of the most useful tests with the method of application and the value as in this book; and they are discussed, not only theoretically but by application to actual cases.

Another difficulty met with by those who would take up for themselves the study of the defectives is the technical terms that have recently come in. The reader will be tremendously grateful for the glossary which Mr. Doll gives of a large number of these terms.

The book is also well illustrated with type cases and tests, curves and examination papers. Altogether, the book constitutes one of the most important contributions to the problem of feeble-mindedness that has appeared in a number of years. No one interested in the problem can afford to be without the book.

Both books can be obtained from the Training School.

The Money Value of Education, by A. Caswell Ellis. Published by The Bureau of Education, Washington, D. C., 1917.

This is a most valuable monograph, showing the value of an education in actual money to those who receive it. It is illustrated by many graphic charts and has at the conclusion an elaborate bibliography on the subject.

The argument for giving every child all the education he can take is strong, and we do not wish to detract from it in the least. Nevertheless, there is one fallacy here which appears so often in similar comparisons that we think it should be pointed out.

The graphic chart on page twenty-one of this monograph may be taken as a convenient illustration. The value of education for each class is considered to be the sum which at 5 per cent. interest would yield an income equal to the salary received. The laborer's education is therefore valued at $10,200; the shop apprentice at $15,800; the trade school graduate at $25,000; the technical school graduate at $43,000. The inference naturally drawn is, that if the laborers had gone on to technical school their education would have been worth to them $43,000. The point overlooked here, the fallacy referred to, is that a large proportion of the laborers could never have taken a technical education, simply because they did not have the intelligence. In other words, all such comparisons tacitly assume that all the persons in-

volved were capable of the same high attainments, an assumption that is now known to be contrary to fact. Indeed so contrary to fact is it that it is probably much nearer the truth to say that, taken on the whole, people are earning all that they are capable of earning.

There are, of course, many exceptions and there are unfortunately many people who stop going to school upon a mere whim, or because something attracts them away from further training. It must be remembered, however, that many of those persons later pick up, in one form or another, the education that is necessary, so that those who have the intelligence ultimately fit in to a position in life which utilizes all their capacity.

Such studies as this emphasize more than anything else the necessity of first measuring the intelligence of the boys and girls and ascertaining for what they are capable, or at least to what mental level they have attained or are likely to attain. As much harm can be done by pushing a child who has only the capacity to be a laborer on into the technical school as by neglecting one who has the capacify for taking the technical education.

It has long been said that many a boy has been sent to college who should never go to college. The recognition of this fact and the discovery of who is capable of the more extended training should be the next great step in education.

The Psychological Review has changed its address from 64 West Fifty-sixth street, New York, to 3617 Tenth street, Washington, D. C.

The Public Charities Association of Pennsylvania, under the title "A War-Time Program," says:

"Shall all the constructive efforts organized in time of peace to meet the problems of pauperism, insanity, mental defect, crime, neglected childhood, be abandoned, now that the nation is at war?

"Shall the feeble-minded wander aimlessly through the community, increasing the burden of crime, pauperism and disease, and multiplying their kind without end?

"Shall those convicted of crime be kept together in idleness, to breed mischief, indolence and hopelessness, and then be returned to society with neither the desire nor the capacity to earn an honest living?

"Shall neglected children be deprived of the benefit of the States' thoughtful and far-sighted care and protection?

"Shall all progress halt, because the nation is at war?

"Every qualified spokesman of the Federal Government, from the President down, every organization that is dealing directly with war problems, including the State Committee of Public Safety, every forward-looking citizen who realizes the social reactions of this great war, answers emphatically 'No!'"

Teaching Domestic Science in War Time

Katharine A. Early, Vineland

Teaching Domestic Science in war times is decidedly different from teaching it under normal conditions. Nevertheless, the careful planning of a course of study, which is both suited to the children and complies with Mr. Hoover's requests, makes the work even more interesting than usual.

There are several branches of work in the school which come under the head of Domestic Science and which are taught in the Domestic Science room. First, there is the ironing. Each week many pieces of children's clothing are sent over from the laundry for the girls and boys to practice on. They begin on blouses and aprons and are taught the best way to iron them so as to get good results. After much repetition the task is accomplished. When a child is able to iron an apron and a blouse successfully he is graduated. The next undertaking is a dress and finally a pair of rompers.

Next come the lessons in bed-making. A single white iron bed with a good mattress, attractive linen, blankets, and counterpane has its place in this room. The children are taught to make the bed up neatly and carefully, so that they will be able to make their own little beds at the cottages.

Then comes the table-setting and table service. We have a model dining room with all of its equipment; a china closet, dishes, table silver, a round table with fresh white linen, chairs, and serving tables. And in this model dining room the boys and girls are taught to set the table and wait on table as it is done in the family dining rooms. In all of our work in the Domestic Science Department our aim is to teach the children to do things in such a way that they will be able to help more efficiently with the work in the cottages.

Then last comes the most interesting of all, the work which is most affected by the present war conditions. This is the cooking. All of the children love the cooking lessons. The older boys and girls have the work every day. To the other children, it is held up as a reward for especially good behavior. And these children will do any task, no matter how difficult, in order to attain the privilege of cooking. When it comes time to choose the honored boys and girls, the following points are considered: (1) Whether the child has a clean O. K. slip with no holes; (2) whether he has been faithful in bringing his O. K. slip to school each day; (3) his class work during the week, and (4) his attitude toward the other children. In planning the work an effort has been made to give lessons which are, first of all, adapted to the child; secondly, which are economical and which would

be approved of by the Food Administration; and, third, which teach the prepartion of the foods served in the cottages. Many of our lessons have consisted of meat substitutes, breads containing little or no wheat flour, and desserts with only small quanties of sugar. Not a scrap of anything has been wasted. The older girls are very much interested in the reasons why we are co-operating in this way with our Government and are anxious to do their bit.

Throughout all of the work taught in the Domestic Science room, the habit of being clean and neat and orderly is cultivated as much as possible. And this, of course, is fully as valuable as anything which the children learn in this department. It requires constant watching and talking and praising, but I think all will agree that in the end it is really worth while.

Irrigation of Crops for Cattle

George A. Mitchell, Vineland

The most general idea regarding the sewage of institutions, towns and cities is that it should be disposed of with only such expense as is necessary to render it safe from a sanitary standpoint. Even then the effluent from the sewage disposal beds as it flows into some streams is objectionable to the people of some town that takes its water supply from the same stream.

Sewage irrigation is the process of flowing sewage over land on which crops are growing or are to be grown. Thus the crops are not only irrigated, that is, furnished with water artificially, but they are fertilized.

The Training School is located some distance from any stream and various expedients have been tried for sewage disposal. In the year 1904 a triangular tract of about two acres of land was fitted with distributing furrows and sowed broadcast to field corn. The raw sewage was supposed to spread out fan shaped in furrows over this field, but it is was so difficult to do anything among the corn that a good deal of the sewage collected in a pond at the lowest place. This was continued about three years and considerable corn fodder was produced, but this method of sewage disposal and irrigation was unsatisfactory. The next expedient was to make excavations for two ponds with a total area of one-third of an acre. A brick flume was constructed between these two ponds from which the sewage flow could be directed into one pond until full, then into the other. The sewage water simply soaked away or evaporated and the sediment was occasionally cleaned out. This method was unsatisfactory even after the sewage was passed thru a septic tank.

In the year 1910 Mr. M. B. Williams, Irrigation Engineer of the United States Department of Agriculture, installed a distribution system and graded three acres of land so that field corn in rows and alfalfa could be irrigated with the sewage. Both of these responded with large crops, but field corn has been the main crop used for this purpose. In 1916 and 1917 the irrigation, as well as the fertilization, has been valuable on the corn, especially in causing a good set of ears and consequently a good yield of grain, altho there was not so much difference in the height of the stalks. Measured plots showed in 1916 a yield per acre on the sewage irrigated of 114 bushels of ears per acre, on the unirrigated of 45 bushels of ears per acre.

In 1917 the difference in yield was somewhat greater, the irrigated yielded 140 bushels of ears per acre.

At the Training School one of the boy-men goes to the sewage irrigated field every morning to do what has been carefully outlined for him to do. The institution farmer goes to the field at least once each week; in very cold or very wet weather, more than once, to see if the work is being properly done. This regular attendance is likely to give the impression, erroneously, that a great deal of time is being spent, but in reality it amounts to only a few full days per year. During a long cold spell like that this winter more careful and intelligent management is necessary. During the cold weather of December and January, 1917-18, the sewage at the Spring City Sewage Irrigation Plant was disposed of more easily than at the Training School altho the soil at Spring City is clay and at the Training School is sandy. This is accounted for partly by the fact that there is more land at Spring City and that when there is a surplus of sewage to run off from frozen ground it collects in several depressions.

In starting sewage irrigation it is desirable that some one who is interested in its success shall keep a rather close watch on its operation at first.

Any institution or municipality desiring to utilize their sewage for crop production can secure advice and probably engineering assistance by addressing Mr. S. H. McCrory, United States Department of Agriculture, Washington, D. C.

What becomes of the extra-institutional cases; those who are kept in the homes, those who leave the institutions and especially those who pass through the special classes and are then turned out? There is a difference of opinion with all of the facts to be settled. It is claimed by some that a large percentage of children who have passed through the special classes have formed such good habits that they live fairly useful, happy lives. Others claim that they almost immediately drift into bad habits and companions and again become burdens to society. We need research and surveys to tell us just what the facts are.